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SUBJECT

Evaluation of "Coconut Shell Charcoal Briquette" Sample for Self-Heating Substance Test

CLIENT

PT. BENTENG MAKMUR SEJAHTERA
KOMPLEK RUKO DANAU SUNTER
BLOK D NO. 2, JAKARTA UTARA

DATE OF RECEIVED SAMPLE

October 18th, 2019

DESCRIPTION OF SAMPLE

Coconut Shell Charcoal Briquette

DATE OF TESTING

October 19th up to October 20th, 2019

The below findings are based on sample/s only, which is/are submitted or supplied by client. This report is valid within 30 days from date of testing.

2



METHOD OF TEST

The self heating substances test was performed according to United Nations "Recommendations on the Transport Dangerous Good, Manual of Test and Criteria" (33.3.1.3.3) Self heating substances, using method of UN 33.3.1.6 "Test N.4: Test method self heating substances".

The sample in the received form was placed into a 100 mm cubic mesh sample container made of stainless steel. The container was then hung at the centre of the oven. The oven temperature was slowly raised to 140° C and kept constant for 24 hours. The temperature at the centre of the sample and temperature between the container and oven were recorded continuously.

RESULT

Table 1: Analysis result for "Coconut Shell Charcoal Briquette" Sample

Sample	Oven Temperature (°C)	Cube Size (mm)	Maximum Temperature Reached (°C)	Result
Coconut Shell Charcoal Briquette	140	100	142.9	Negative

The above result showed that the "Coconut Shell Charcoal Briquette" sample shall not be classified in self heating substance of division 4.2 – *Substance liable to spontaneous combustion*.

Remark

The 24 hours temperature profiles were enclosed in pages 3 for your references. T1 represented temperature in the center of the sample. T2 represented temperature between the container and the oven wall.

Jakarta, October 22nd, 2019
PT. CARSURIN

Dede Jemmi Supriadi
Head of Laboratory

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Amran Lesmana
Head of Technical Charcoal



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24 hours Temperature Profile "Coconut Shell Charcoal Briquette" at 140° C (100mm cube)

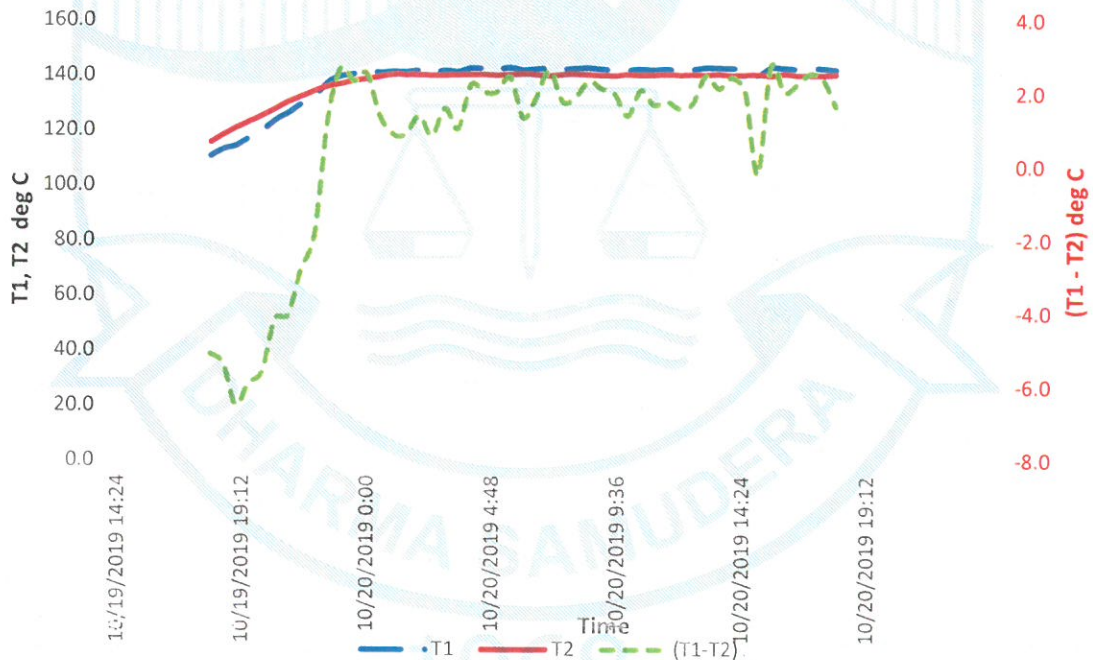
Start Time : October 19th, 2019 18:00:00
 Stop Time : October 20th, 2019 18:00:00
 Elapsed Time : 24:00:00
 Interval : 0:30:00
 Total readings : 49

Thermocouple Type : K
 Scaling : (none)

	Max Time Stamp	Max	Average	Min	Min Time Stamp
T1	10/20/2019 16:30	142.9	138.1	110.6	10/19/2019 18:00
T2	10/20/2019 16:30	140.7	137.4	115.7	10/19/2019 18:00
T1-T2	10/20/2019 04:30	2.8	0.7	-6.5	10/19/2019 18:00

Performance Record Temperature - Self Heating Test

Coconut Shell Charcoal Briquette
PT BRIPINDO SEJAHTERA



Remark:
 T1 represented temperature in the centre of the sample. T2 represented temperature between the container and the oven wall.



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REPORT OF ANALYSIS

Description : COCONUT SHELL CHARCOAL BRIQUETTE
Manufactured / Shipper : PT. BENTENG MAKMUR SEJAHTERA
KOMPLEK RUKO DANAU SUNTER
BLOK D NO. 2, JAKARTA UTARA
Sample Weight : 3.00 kgs
Date of Received : October 18th, 2019
Date of Analysis : October 19th up to October 20th 2019

Analysis

Analysis were performed at PT Carsurin Cikarang Laboratory (accreditation by KAN / National Accreditation Committee – Indonesia for ISO 17025:2008 Cert No. LP-415-IDN) in accordance with ASTM Standard. The results of our analysis are as follows:

The results of our analysis are as follows:

Parameter	Unit	Results		Method
		Wet Basic	Dry Basic	
Moisture	Pct	5.40	-	ASTM D1762-84 (REAPPROVED 2013)
Ash Content	Pct	1.28	1.35	ASTM D1762-84 (REAPPROVED 2013)
Volatile Matter	Pct	14.08	14.88	ASTM D1762-84 (REAPPROVED 2013)
Fixed Carbon	Pct	79.24	83.77	By Calculation

This certificate refers solely to the analysis in accordance with the details described herein and does not certify any other matter, and is issued without prejudice.

Jakarta, October 22nd, 2019

PT. CARSURIN



Dede Jenini Supriadi

Head of Laboratory